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CLMPTO

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1-8 Cancelled

~~FIGURE 1~~
8. (Amended) In an RF communications network having a communication channel, an access point and a portable data collection terminal, wherein the portable data collection terminal having a transceiver which may be selectively powered up or down to conserve energy, a method used by the portable data collection terminal for gaining access to the communication network, comprising the steps:

- (a) powering up the transceiver;
- (b) sensing the communication channel for a first predetermined time;
- (c) if during the sensing of the communication channel the channel remained clear, transmitting to the access point; and
- (d) If during the sensing of the communication channel the channel did not remain clear, waiting for a second predetermined time, and branching to step

(b).-

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~~10~~. The method of claim ¹~~8~~, wherein said first predetermined time is greater than or equal to the maximum time between the access point's transmissions when engaged in a communications exchange.

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~~11~~. In an RF communications network having a communication channel, an access point and a portable data collection terminal, wherein the portable data collection terminal having a transceiver which may be selectively powered up or down to conserve energy, a method used by the portable data collection terminal for gaining access to the communication network, comprising the steps:

- (a) powering up the transceiver;
- (b) resetting a retry count;
- (c) sensing the communication channel for a first predetermined time;

- (c) if during the sensing of the communication channel the channel remained clear, transmitting to the access point, else, if the channel did not remain clear, incrementing a retry count; and

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(e) if the retry count is less than a threshold value, branching to step (c), else, powering down the transmitter for a period of time before branching back to step (a).

⁴
12. In a local area communications network having a communication channel, a host computer, an access point, and a portable data collection terminal, wherein the portable data collection terminal has the capability to enter a sleep mode when not transmitting or receiving, and the access point periodically transmit SYNC messages, a method used by the portable data collection terminal for gaining access to the communication network, comprising the steps:

(a) waking up when data is available for transmission to the host computer;

(b) waiting for a first predetermined time in order to receive a SYNC message from the access point;

(c) sensing the communications channel for a second predetermined time to determine if the channel is busy;

(d) transmitting a request for poll to the access point if the channel is clear for the second predetermined time; and

(e) if the channel is busy during the second predetermined time, repeating step (b).

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13. The method of claim ^A12, wherein said first predetermined time is greater than or equal to the time between SYNC messages minus the maximum interpoll gap time.

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14. The method of claim ⁴12, wherein said second predetermined fixed time is greater than or equal to the maximum interpoll gap time.

¹
15. A method used by a sending device for beginning a data exchange over an RF communication link with a polling device, wherein the polling device has an interpoll gap time, comprising the steps of:

(a) identifying that the RF communication link is clear throughout a period which is at least as long as the interpoll gap time; and

(b) transmitting a request for poll frame.

⁸
16. The method of claim ⁷15 further characterized by the steps of:

(a) generating a pseudo-random number corresponding to a first pseudo-random time which is at least as long as the interpoll gap time;

(b) sensing the channel for a time substantially shorter than the first pseudo-random time;

(c) repeating step (b) until the channel is detected as being busy, or the channel is detected as being clear at every sense until the first pseudo-random time is reached;

(d) if the channel is detected as being busy, executing a second pseudo-random time delay back-off and returning to step (a); and

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(e) If the channel has been detected as being clear for the entire first pseudo-random time period, transmitting a request for poll frame.

⁸/~~7~~. The method of claim ⁸/~~16~~ wherein step (d) further comprises the step of incrementing a retry counter and testing said retry counter such that a second pseudo-random back-off and retry will not be performed if said retry counter is above a predetermined threshold value.

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